Mn-Ni-Sn based full Heusler alloys for low temperature giant exchange bias applications

The present invention relates to an intermetallic alloy series having a large exchange bias effect, comprising the formula Mn$_{50}$Ni$_{42}$-$\delta$Sn$_{8}+\delta$ ($\delta = 0, -0.25$ and $\pm 0.5$) wherein $\delta$ represents an atomic percentage content. The present invention further relates to a process for the preparation of intermetallic alloy series having a large exchange bias effect, comprising the formula Mn$_{50}$Ni$_{42}$-$\delta$Sn$_{8}+\delta$ ($\delta = 0, -0.25$ and $\pm 0.5$) by arc melt technology.

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